

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) An optical receiver for receiving a signal light propagated from an optical path, the signal light having a concave frequency response ~~with a concave~~ influenced by an accumulated dispersion of the optical path, the optical receiver comprising:

an optical-to-electrical converter for converting the signal light to an electrical current;

a current-to-voltage converter for receiving the electrical current from the optical-to-electrical converter and for outputting a voltage signal corresponding to the electrical current;

[[and]]

a first filter with a convex frequency response having a peak frequency to compensate the concave frequency response of the signal light, [[for]] the first filter filtering the voltage signal from the current-to-voltage converter and [[for]] outputting an electrical signal corresponding to the signal light[[,]]; and

a control signal generator having a second filter and a divider, the second filter, which is a band-pass filter, receiving the voltage signal from the current-to-voltage converter to filter and outputting a filtered signal with a magnitude at a center frequency of the band pass filter, the divider outputting a control signal to the first filter by receiving the voltage signal from the current-to-voltage converter and the filtered signal from the second filter, the control signal being a ratio of the filtered signal to the voltage signal,

~~wherein the filter has a frequency response with a convex so that the frequency response of the signal light is compensated~~

wherein the peak frequency of the first filter is varied by the control signal from the control signal generator.

2. (Currently amended) The optical receiver according to claim 1,
wherein the ~~frequency response of the filter~~ has a peak frequency of the first filter is from 2 GHz to 4 GHz.

3. (Cancelled)

4. (Currently amended) The optical receiver according to claim ~~[[2]]~~ 1,
wherein the first filter includes at least an inductor with an inductance that is changed by the control signal from the control signal generator.

5. (New) An optical receiver for receiving a signal light from a dispersive optical path, the signal light having a first frequency response with a bottom frequency between 2 GHz to 4 GHz due to the dispersion of the optical path, the optical receiver comprising:

a photodiode for converting the signal light to an electrical current;

a current-to-voltage converter for outputting a voltage signal corresponding to the electrical current;

a passive filter coupled to the current-to-voltage converter, the passive filter having a second frequency response compensating the first frequency response of the signal light, the second frequency response having a variable peak frequency controlled by a control signal; and

a control signal generator for outputting the control signal to the passive filter,

wherein the control signal generator includes a band-pass filter and a divider, the band-pass filter receiving the voltage signal from the current-to-voltage converter, and the divider outputting the control signal to the passive filter by dividing an output of the band-pass filter with the voltage signal.

6. (New) The optical receiver according to claim 5,

wherein the photodiode is an avalanche photodiode.

7. (New) the optical receiver according to claim 5,

wherein the passive filter includes at least an inductor with an inductance that is changed by the control signal from the control signal generator.